STORMWATER MANAGEMENT AND BIOLOGICAL BMPs

JFNew

STORMWATER MANAGEMENT PLANS

Plans must address six minimum control measures. Measure 5 is:

Post construction stormwater management in new development and redevelopment.

- Establish ordinance requiring implementation of post-construction controls.
- **"Develop and implement design strategies that include appropriate best management practices (BMPs)".**
- Ensure adequate long-term operation and maintenance of controls.

WHAT ARE BEST MANAGEMENT PRACTICES (BMPs)?

Definitions:

Combination of management, cultural and structural practices that provide the most effective and economical means of stormwater management.

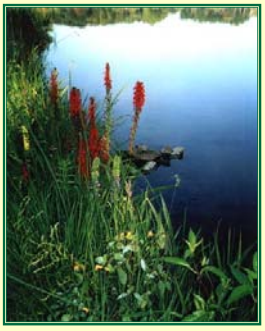
A structural or non-structural device designed to temporarily store or treat urban stormwater runoff in order to mitigate flooding, reduce pollution, and provide other amenities.

EXAMPLES OF BMPs

- Detention Basins
- Media Filters
- Porous Pavement
- Retention Ponds
- Hydrodynamic Devices
- Wetlands
- Sediment Traps

BIOLOGICAL BMPs

- Wetland Basins
- Wetlands
- Vegetated Swales
- Riparian Buffer Strips
- Pond Buffers
- Riparian Zone Preservation
- Minimization of Disturbances
- Maximization of Natural Area Open Spaces
- Green Roof Systems
- Infiltration Enhancement



WETLAND BASINS

VEGETATED PONDS

WETLANDS

VEGETATED SWALES

VEGETATED SWALES

Benefits

- Reduction in runoff velocities
- Increase in time of concentration
- Infiltration of stormwater runoff
- Filtration of sediment and pollutants
- Reduction in infrastructure costs

Maintenance Requirements

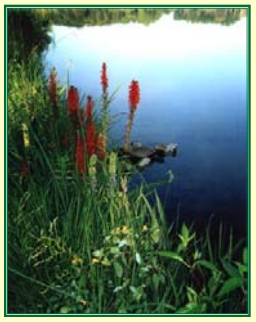
- Vegetation should be inspected after every rainfall during establishment
- Erosion should be repaired after major rainfalls
- Vegetation should be maintained to maximize dense growth
- Sediment and trash build up should be removed

Limitations

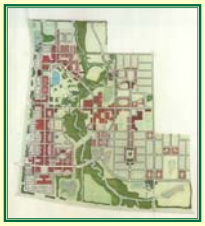
- Use in areas of medium to shallow slopes and with smaller drainage areas
- Maintain vegetation for maximized benefit

RIPARIAN BUFFER STRIPS

POND BUFFERS

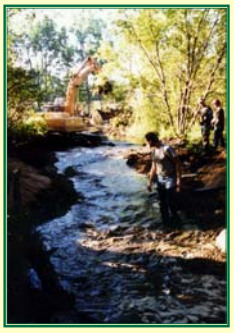


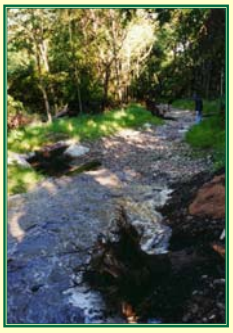
RIPARIAN ZONE PRESERVATION



Coffee Creek Center is a 640-acre neo-traditional community in Northwest Indiana developed by Lake Erie Land Company. Coffee Creek Watershed Conservancy is a non-profit organization dedicated not just to the long-term protection and management of Coffee Creek Center's 180 acres, but also to the health of the entire watershed.

MINIMIZATION OF DISTURBANCES





INFILTRATION ENHANCEMENT

DEVELOPING MANAGEMENT PLANS

Step 1: Site Inventory and Assessment

Step 2: Master Plan

Step 3: Evaluate BMP Opportunities within Master Plan

Step 4: Select Appropriate BMPs

CRITERIA FOR SELECTING BMPs TO IMPLEMENT

- Land Area / Physical Feasibility
- Cost
- Pollutant Removal Benefit/Effectiveness
- Side Benefits (aesthetics, wildlife habitat, etc.)
- Maintenance

ADDITIONAL INFORMATION

www.jfnew.com

www.stormwatercenter.net

www.epa.gov/owm/sw/phase2

www.bmpdatabase.org